

Abstract

The present invention relates to a nucleic acid molecule comprising a 5' portion of an intestinal lactase-phlorizine hydrolase (LPH) gene contributing to or indicative of the adult-type hypolactasia wherein said nucleic acid molecule is selected from the group consisting of (a) a nucleic acid molecule having or comprising the nucleic acid sequence of SEQ ID NO: 1, the sequence of SEQ ID NO:1 is also depicted in Fig. 4 and comprised in the sequence as depicted in Fig. 8; (b) a nucleic acid molecule having or comprising the nucleic acid sequence of SEQ ID NO: 2, the sequence of SEQ ID NO:2 is also depicted in Fig. 5 and comprised in the sequence as depicted in Fig. 9; (c) a nucleic acid molecule of at least 20 nucleotides the complementary strand of which hybridizes under stringent conditions to the nucleic acid molecule of (a) or (b), wherein said polynucleotide/nucleic acid molecule has at a position corresponding to position -13910 5' from the LPH gene a cytosine residue; and (d) a nucleic acid molecule of at least 20 nucleotides the complementary strand of which hybridizes under stringent conditions to the nucleic acid molecule of (a) or (b), wherein said polynucleotide/nucleic acid molecule has at a position corresponding to position -22018 5' from the LPH gene a guanine residue. The present invention further relates to methods for testing for the presence of or predisposition to adult-type hypolactasia that are based on the analysis of an SNP contained in the above recited nucleic acid molecule. Additionally, the present invention relates to diagnostic composition and kit useful in the detection of the presence of or predisposition to adult-type hypolactasia.